REMARKS

By the present Amendment, Applicant amends claim 1 to more appropriately define the claimed subject matter. Claims 1, 2, 7, 9, 11, 13, and 15 remain pending in this application.

In the Office Action mailed May 28, 2008[1], the Examiner rejected claims 1, 2, 7, 9, 11, 13, and 15 under 35 U.S.C. § 103(a) as unpatentable over U.S. Patent No. 5,994,762 to Suwanai et al. ("Suwanai") in view of Stanley Wolf et al., "Silicon Processing for the VLSI Era," 2000, Volume 1, Lattice Press, 719-727, 791-795 ("Wolf"), and further in view of U.S. Patent No. 6,770,977 to Kishida et al. ("Kishida"). Applicant respectfully traverses the rejection because the Examiner has not established that the claims are obvious over the cited references.

The key to supporting any rejection under 35 U.S.C. § 103 is the clear articulation of the reason(s) why the claimed invention would have been obvious. Such an analysis should be made explicit and cannot be premised upon mere conclusory statements. See M.P.E.P. § 2142, 8th Ed., Rev. 6 (Sept. 2007). "A conclusion of obviousness requires that the reference(s) relied upon be enabling in that it put the public in possession of the claimed invention." M.P.E.P. § 2145. Furthermore, "[t]he mere fact that references can be combined or modified does not render the resultant combination obvious unless the results would have been predictable to one of ordinary skill in the art" at the time the invention was made. M.P.E.P. § 2143.01(III), internal citation omitted. Moreover, "[i]n determining the differences between the prior art and

[1] The Office Action contains a number of statements reflecting characterizations of the related art and the claims. Regardless of whether any such statement is identified herein, Applicant declines to automatically subscribe to any statement or characterization in the Office Action.

the claims, the question under 35 U.S.C. § 103 is not whether the differences themselves would have been obvious, but whether the claimed invention as a whole would have been obvious." M.P.E.P. § 2141.02(I), internal citations omitted (emphasis in original).

It would not have been obvious for one of ordinary skill to combine the teachings of Suwanai, Wolf, and Kishida to obtain a semiconductor device comprising, *inter alia*, "a first insulating film formed above the semiconductor substrate and having a relative dielectric constant of 3.8 or less" and "a second insulating film covering the outer side face of the conductor and having a relative dielectric constant of over 3.8, at least a part of the second insulating film being formed at a same vertical position on a direction orthogonal to the semiconductor substrate as the first insulating film." Even the combination of teachings from Suwanai, Wolf, and Kishida that was previously suggested by the Examiner fails to include "a second insulating film covering the outer side face of the conductor . . ., at least a part of the second insulating film being formed at a same vertical position on a direction orthogonal to the semiconductor substrate as the first insulating film," as recited in claim 1 (emphasis added).

Fig. 11 of Suwanai, which was previously relied upon by the Examiner, shows a device that includes a semiconductor substrate 1, a wiring 18 formed within a first BPSG (boron-doped phospho silicate glass) film 17, and a silicon oxide film 27. *See* col. 7, line 66 to col. 8, line 4. Suwanai further shows a second BPSG film 20 formed above the wiring 18, the first BPSG film 17, and the silicon oxide film 27. *See* col. 8, lines 25-27. The Examiner alleged that the first BPSG film 17 and the silicon oxide film 27 correspond to the claimed "first insulating film," and that the second BPSG film 20

corresponds to the claimed "second insulating film." Office Action, page 2, numbered paragraph 5, to page 3.

Even if the Examiner's allegations were correct, which Applicant does not concede, Suwanai nevertheless fails to teach or suggest "a second insulating film covering the outer side face of the conductor . . ., at least a part of the second insulating film being formed at a same vertical position on a direction orthogonal to the semiconductor substrate as the first insulating film," as recited in claim 1 (emphasis added). The second BPSG film 20 of Suwanai is not "formed at a same vertical position on a direction orthogonal to the semiconductor substrate as" the first BPSG film 17, as required by claim 1 (emphasis added). Instead, the second BPSG film 20 is only formed above the first BPSG film 17 and the silicon oxide film 27.

The Examiner has argued that "vertical position and horizontal position are in fact reactive [sic] positions. If the images disclosed by Suwanai are rotated by 90 degree at least a part of the second insulating film is formed at a same vertical position as the first insulating film." Office Action, page 5, numbered paragraph 9.

Applicant reasons that claim 1, as amended, recites that the "vertical" direction is "orthogonal to the semiconductor substrate" (emphasis added). In other words, this "vertical" direction is orthogonal (i.e., at a right angle) to the plane of the substrate. Therefore, regardless of how the images disclosed by Suwanai may be rotated, the second BPSG film 20 of Suwanai is not "formed at a same vertical position on a direction orthogonal to the semiconductor substrate as" the first BPSG film 17 or the silicon oxide film 27, as required by claim 1 (emphasis added). A direction "orthogonal" to the substrate 1 of Suwanai extends upward from the surface of substrate 1,

intersecting films 17 and 27, and also intersects film 20. However, as shown in Figure 11 of Suwanai, film 20 is entirely at a different position, measured along this vertical direction, than either film 17 or film 27. Accordingly, film 20 is not "formed at a same vertical position on a direction orthogonal to the semiconductor substrate" as film 17 or film 27. Thus, Suwanai does not teach or suggest "a second insulating film covering the outer side face of the conductor . . ., at least a part of the second insulating film being formed at a same vertical position on a direction orthogonal to the semiconductor substrate as the first insulating film," as recited in claim 1.

Wolf does not make up for the deficiencies of Suwanai because Wolf also fails to teach or suggest "a second insulating film covering the outer side face of the conductor . . ., at least a part of the second insulating film being formed at a same vertical position on a direction orthogonal to the semiconductor substrate as the first insulating film," as recited in claim 1 (emphasis added). The Examiner does not rely on Wolf for any teaching or suggestion of "a second insulating film . . ., at least a part of the second insulating film being formed at a same vertical position on a direction orthogonal to the semiconductor substrate as the first insulating film," as required by claim 1.

Kishida fails to make up for the deficiencies of Suwanai and Wolf because Kishida also does not teach or suggest "a second insulating film covering the outer side face of the conductor . . ., at least a part of the second insulating film being formed at a same vertical position on a direction orthogonal to the semiconductor substrate as the first insulating film," as recited in claim 1 (emphasis added). The Examiner does not rely on Kishida for any teaching or suggestion of "a second insulating film . . ., at least a part of the second insulating film being formed at a same vertical position on a direction

orthogonal to the semiconductor substrate as the first insulating film," as required by claim 1.

The Examiner's proposed combination of Suwanai, Wolf, and Kishida fails to teach or suggest the semiconductor device recited in claim 1, and the Examiner has not identified any reason why one of ordinary skill would otherwise modify Suwanai, Wolf, and Kishida, either individually or in combination, to obtain the semiconductor device recited in claim 1. Thus, claim 1 and claims 2, 7, 9, 11, 13, and 15, which depend therefrom, are allowable over Suwanai, Wolf, and Kishida.

CONCLUSION

In view of the foregoing amendments and remarks, Applicant respectfully requests reconsideration of this application and the timely allowance of the pending claims.

Please grant any extensions of time required to enter this response and charge any additional required fees to Deposit Account No. 06-0916.

Respectfully submitted,

FINNEGAN, HENDERSON, FARABOW,
GARRETT & DUNNER, L.L.P.

Dated: August 28, 2008

By: _____
Reece Nienstadt
Reg. No. 52,072